

DECLARATION OF RANDALL A. SNYDER

I, Randall A. Snyder, hereby declare as follows:

1. My name is Randall A. Snyder. I am an adult over the age of 18 and a resident of the state of Nevada. I have personal knowledge of each of the matters stated herein, and if called to testify I could and would testify competently about them.
2. I am an independent telecommunications technology consultant and reside at 8113 Bay Pines Avenue, Las Vegas, Nevada, 89128. I have been retained by the law firm of Edelson McGuire, LLC to provide my expert opinions relating to technology described within the Telephone Consumer Protection Act, 47 U.S.C. § 227 (“TCPA”) and their claims that Stonebridge Life Insurance Company and Trifecta Marketing Group LLC (“Defendants”) violated this act. In particular, I have been asked to determine the technology and methodology used by Defendants to transmit cellular text messages en masse from the cellular telephone number 650-283-0793 to nearly 60,000 cellular telephone subscribers. My opinions in this declaration are based on my education, experience, and training, and my review of the following documents in this case: Plaintiffs’ Amended Class Action Complaint; Subpoena to T-Mobile USA, Inc. related to cellular phone bills associated with Defendants; cellular phone bill call detail records (“CDRs”) provided by T-Mobile USA, Inc. related to cellular phone bills associated with Defendants; instructions titled How to Read Prepaid Call Records Guide; Telephone Consumer Protection Act, 47 U.S.C. § 227, *et seq.* (“TCPA”) and regulations promulgated thereunder; the FCC’s Report and Order in the Matter of Rules and Regulations Implementing the Telephone Consumer Protection Act of 1991 dated February 15, 2012; and the Appeal from the United

1 States District Court for the Northern District of California, No. 07-16356, D.C. No.
2 CV-06-02893-CW Opinion, filed June 19th, 2009.

3 3. I have over 25 years of experience in telecommunications network and system
4 architecture, engineering, design and technology. I consider myself to be an expert in
5 the fields of both wireline and wireless telecommunications networking technology.
6 A copy of my *curriculum vitae* is attached to this declaration. I have been a testifying
7 and consulting expert for more than 30 cases regarding telecommunications
8 technology including nine cases regarding the TCPA and associated regulations.
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10 4. I have taught many classes and seminars on both wireline and wireless
11 telecommunication network technologies and have been a panelist and speaker at
12 numerous conferences at the Institute of Electrical and Electronics Engineers (IEEE),
13 the Personal Communication Society (PCS), and the Cellular Telecommunications
14 and Internet Association (CTIA) as an expert in telecommunication networks. I spent
15 seven years developing standards within the American National Standards Institute's
16 subsidiary organization, the Telecommunications Industry Association (TIA),
17 providing technical contributions and authoring and editing telecommunications
18 proposed standards documents. Most notably, I authored and oversaw the
19 standardization of Interim Standard 93, providing interconnection technology
20 between wireline and wireless networks, which is a fully accredited national standard
21 of the American National Standards Institute (ANSI). I am the co-author of the
22 McGraw-Hill books "Mobile Telecommunications Networking with IS-41," and
23 "Wireless Telecommunications Networking with ANSI-41, 2nd edition" published in
24 1997 and 2001, respectively. These books have sold several thousand copies and were
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1 required reading for wireless engineers at AT&T Wireless and Motorola for several
2 years. The latter book has also been relied upon and cited numerous times as a
3 reference for various patents in the telecommunications industry. I have been granted
4 nine patents myself on telecommunications networking technology and currently
5 have nine additional published patents pending. I have also authored several articles
6 on telecommunications technology and have been quoted numerous times in industry
7 trade publications. I have consulted and been employed for many wireline and
8 wireless telecommunications companies including McCaw Cellular, AirTouch,
9 AT&T Wireless, Lucent, Nokia, Ericsson, Nextwave, MCI, Sprint and other
10 telecommunications technology vendors and service providers. I was also nominated
11 in 2006 for a National Television Arts Emmy Award for Outstanding Achievement in
12 Advanced Media Technology for unique wireless content distribution technology I
13 designed while employed at Entriq, Inc. Still more detail as well as details of
14 publications that I have authored or co-authored within at least the past 10 years are
15 provided in my *curriculum vitae* attached as Exhibit A along with a list of cases
16 where I served as a testifying expert and my standard rate sheet. I am being
17 compensated at the rate of \$400 per hour for my study, analysis and testimony in this
18 case.
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- 21 5. The TCPA prohibits unsolicited voice and text calls to cellular telephone numbers
22 using an Automated Telephone Dialing System ("ATDS"). Based on my review of
23 the relevant documents and the facts described above, my opinion is that Defendants
24 employed technology that used an ATDS. My opinion is based on the fact that
25 Defendants employed technology that uses an ATDS and used that technology, as
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1 defined in the TCPA and accompanying FCC regulations, with the intention of
2 communicating with nearly 60,000 cellular telephone subscribers without obtaining
3 those subscribers' explicit and express consent to do so.

- 4 6. The use of Short Message Service (SMS), more commonly known as "text
5 messaging" in the U.S., is ubiquitous. There are currently more than 330 million
6 wireless subscriber connections in the U.S., according to the Cellular
7 Telecommunications and Internet Association, and more than 193 billion text
8 messages are currently sent each month.
- 9 7. SMS is defined as a "peer-to-peer" messaging technology, meaning that it is a
10 communications system and method designed to enable an individual cellular
11 subscriber to send or originate a short text message communication (typically no
12 more than 160 characters) from his or her cellular telephone to another individual
13 subscriber's cellular telephone that is the intended destination of the message, i.e., the
14 message recipient. SMS messages are sent individually from one subscriber to
15 another using cellular telephone numbers as the destination address of the message.
16 The message sender's cellular telephone number is preserved as part of the message
17 at the destination cellular telephone where the message is received so that the
18 message recipient knows the cellular phone number address of the message sender.
- 19 8. Many companies have emerged that provide what is known as value-added text
20 messaging services using SMS technology. These companies are technically referred
21 to as Value Added Service Providers ("VASPs") and many of them are external
22 entities to the cellular network operators. These VASPs provide a variety of text
23 messaging services (i.e., SMS) that are not strictly peer-to-peer in the sense of
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subscriber-to-subscriber; rather, they are companies that use automated computer equipment to send and receive text messages using SMS to and from individual cellular telephone subscribers.

9. These VASPs are typically in the business of creating and operating text message-based applications on behalf of branded or marketing companies that desire to develop and maintain some personalized communication with cellular telephone subscribers. These VASPs have the ability to send large quantities of text messages en masse to subscribers as well as receive individual text messages from those subscribers. Messages sent from a VASP to a cellular subscriber are termed “mobile-terminated” (“MT”) and messages sent from a cellular subscriber to a VASP are termed “mobile-originated” (“MO”).
10. The automated computer equipment that these VASPs employ is used for a variety of text messaging applications, marketing campaigns and dialogs to communicate with cellular subscribers. Common applications are voting (the most popular example being the text message voting used to vote for contestants on the American Idol television program) as well as receiving mobile coupons, news alerts and sports scores. For applications delivering mobile content via MT messages, the same exact text message is sent to multiple subscribers using their cellular telephone numbers.
11. “Opting-in” is a term that describes a method by which a cellular subscriber explicitly and expressly provides individual consent to inform the VASP that they are willing to receive messages from the VASP for a specific text message application or campaign. Generally, consent is not broadly given for multiple text message applications nor is it given in some “open-ended” fashion (i.e., without limitation)

1 such that a subscriber can “opt-in” to receive any and all application-based text
2 message traffic.

3 12. There are many methods by which a cellular telephone subscriber can “opt-in.” One
4 common method is a text message response by the cellular subscriber to the VASP
5 based upon some sort of “call to action.” For a given application or text message
6 campaign, this “call to action” can be a commercial advertisement from a website,
7 television, radio, newspaper, magazine, billboard, etc. For instance, the actual “call to
8 action” is usually a read or heard message indicating that the cellular subscriber can
9 send a text message to a particular numeric address along with a keyword or words
10 that make up the body of the message. The cellular subscriber uses this MO text
11 message that is sent to the VASP to “opt-in” to the desired application service (such
12 as to receive regular sports updates or to vote for an American Idol contestant).
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14 13. VASPs’ connections to the cellular network operators are Internet connections and
15 use a special number as the address by which cellular text messages are sent and
16 received in order to communicate with cellular subscribers. This number is known as
17 a “short code.” A short code is a special and unique 5- or 6-digit number that is
18 obtained from an independent agency, Neustar, Inc., that manages and assigns these
19 number resources in the United States on behalf of the cellular network operators.
20 Individual short code numbers are either leased by the VASPs on behalf of the
21 companies for which an application is being run or they can be leased by the branded
22 companies themselves and provided to the VASPs. In either case, the VASPs
23 subsequently request that these numbers be provisioned (i.e., programmatically
24 stored) by the cellular network operators so that MO messages can be properly sent
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1 from cellular subscribers to the correct VASP platform applications. In this case, the
2 cellular network operators always approve the service application that uses an
3 individual short code before it is provisioned in their networks. The process requires
4 that the VASP draft and submit a detailed written description of the service
5 application that uses the short code. The detailed description always contains the
6 actual text content of all messages that are to be sent to and received from cellular
7 subscribers, the precise “opt-in” method to be used by cellular telephone subscribers,
8 the number of cellular telephone subscribers expected to be involved in the
9 application communication, when the application will start and end, along with many
10 other details.
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12 14. Over the past few years, many VASPs have appeared that provide cellular text
13 messaging applications using “long codes” or “long numbers.” A long code is an
14 actual dialable cellular telephone number that cellular subscribers can use as the
15 address for which to send MO text messages for a particular text messaging
16 application or marketing campaign. The long code used appears to a cellular
17 telephone subscriber as just another cellular telephone number belonging to someone.
18 In this way, a cellular telephone subscriber can engage in a text messaging application
19 with the owner of the long code, e.g. a VASP, just as they would engage a friend
20 using typical peer-to-peer text messaging. Conversely, MT text messages can be sent
21 from the VASP, or an individual, who owns the long code number to cellular
22 subscribers, making the sender of the message appear to the recipient as just another
23 cellular subscriber.
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1 15. Unfortunately, the VASPs that enable the sending of MT text messages using a long
2 code on behalf of a company wishing to create and operate a mobile text messaging
3 application or campaign, can be exposed to abuse of their platform. These VASPs
4 typically provide a software-based application programming interface (“API”) that
5 can be used by their clients to develop a software application and connect to their
6 message delivery platform for that application. This enables the clients to create their
7 own text messaging applications, create the content in the body of the text message
8 and create a schedule for sending the messages via the VASP’s platform. These types
9 of applications require no explicit approval from the mobile network operators before
10 they are invoked and run. Furthermore, a software application using the API of the
11 VASP can be created to send out cellular text messages en masse to a list of collected
12 cellular telephone numbers, cellular telephone numbers that are randomly generated
13 or cellular telephone numbers that are generated in sequence. If the numbers are
14 simply generated in sequence, there is no way to tell if the telephone numbers
15 generated are wireline or cellular numbers. If the system attempts to send a cellular
16 text message to a wireline number or an invalid number, an error will be raised, the
17 message is not sent and the originating mobile network of the text message does not
18 record a call for the event. This is why gaps are sometimes seen in call records for the
19 originating long code number for messages sent en masse and in sequential order.
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22 16. It is my understanding that The United States Court for the Ninth Circuit has held that
23 “a text message is a ‘call’ within the meaning of the TCPA” (*Satterfield v. Simon &*
24 *Schuster, Inc. No. 07-16356, D.C. No. CV-06-02893-CW Opinion*, June 19th, 2009, p.
25 7339). Furthermore, the FCC has held that prohibitions under the TCPA apply
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1 equally to both voice and SMS calls to cellular telephone numbers (*Rules and*
2 *Regulations Implementing the Telephone Consumer Protection Act of 1991, CG*
3 *Docket No. 02-278, February 15th, 2012*).

4 17. On Tuesday, November 30th, 2010 at 7:48:32 AM, Plaintiff received an unsolicited
5 text message call on her cellular telephone (757-652-3044) from the cellular
6 telephone number 650-283-0793. The content of the text message read: “Thanks 4
7 visiting our website please call 877-711-5429 to claim your \$100 Walmart gift card
8 voucher! Reply stop 2 unsub”.

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10 18. Analysis of the call records obtained from T-Mobile USA, Inc. under subpoena show
11 that between November 15th, 2010 and January 31st, 2011, the number 650-283-0793,
12 i.e. the sender of the unsolicited text message call, was registered to an individual
13 named Vincent Montalbano for a pre-paid cellular subscription service provided by
14 T-Mobile USA, Inc.

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16 19. Further analysis of these call records show that starting at 6:22:51 PM on the evening
17 of Sunday, November 28th, 2010 and 3:38:22 PM on the afternoon of Thursday,
18 December 2nd, 2010 (a period of less than five days), 59,568 continuous text message
19 calls were made every three to five seconds from the cellular telephone number 650-
20 283-0793. Each of these text message calls was to a unique cellular telephone number
21 somewhere within the U.S.

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23 20. Furthermore, these text message calls were made to the unique cellular telephone
24 numbers nationwide in ascending sequential order. From the first text call made on
25 November 28th, 2010 at 6:22:51 PM until the 10,355th text call made on November
26 29th, 2010 at 1:33:43 PM (a period of about 19 hours) the text message calls were sent
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1 in ascending sequence starting with area code 510 up through area code 757. After
2 that time, a second ascending sequence of text message calls was made to cellular
3 telephone numbers starting with area code 202 up through area code 985. This
4 repeating pattern of text message calls from the cellular telephone number 650-283-
5 0793 to unique nationwide cellular telephone numbers in ascending sequential order
6 continues and repeats until the 59,568th call at 3:38:22 PM on the afternoon of
7 Thursday, December 2nd, 2010. On the days between November 28th, 2010 and
8 Thursday, December 2nd, 2010, there are varying time gaps when text calls were not
9 made, anywhere from about 11:00 PM on one evening until about 4:30 AM or 5:00
10 AM the next morning. However, once the text calls recommenced, they were always
11 made to cellular telephone numbers in ascending sequential order.
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13 21. Moreover, the call records for the cellular telephone number 650-283-0793 show that
14 59,568 text message calls from this number were made every three to five seconds
15 over about five days. Since these calls were made in such rapid succession and in a
16 regular and periodic order, they must have been made from a single automated
17 system. It is both implausible and infeasible that multiple automated systems
18 operating separately could perform coincidentally such a regular and ordered
19 communication from a single source address such as the cellular telephone number
20 650-283-0793. There are also gaps in the ascending and incremental sequence of
21 telephone numbers called, indicating that the single automated system used attempted
22 to increment the value of the last number called, but those calls failed, either because
23 they were wireline telephone numbers or invalid telephone numbers.
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1 22. According to the Telephone Consumer Protection Act, 47 U.S.C. § 227 – Restrictions
2 on use of telephone equipment, the term “automatic telephone dialing system” means
3 equipment which has the capacity to: store or produce telephone numbers to be
4 called, using a random or sequential number generator; and to dial such numbers.

5 23. In my opinion, and based on the call records provided by T-Mobile USA, Inc., I
6 conclude that the same text message content was either sent to each of the 59,568
7 cellular telephone numbers or the same message content was sent to each group of
8 numbers whenever the ascending called number sequence was restarted over the five-
9 day period. I make this conclusion because a single automated system must have been
10 used to send these text messages en masse in such rapid succession and in such a brief
11 time period and the text messages were sent in repeated groups of numbers in
12 ascending order. It is inefficient and unlikely that different textual content would be
13 used in the body of each text message sent. It is typical for a common text messaging
14 application to send messages with the same content so the message sender can
15 determine whether the content, or rather the “call to action,” is successful or not.
16 Also, if the message content varied, any successful responses would need to be
17 managed based on varying “calls to action” and these different responses would
18 require different application logic to properly manage them, making the application
19 much more complex.
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21 24. Furthermore, it is impossible for a human to have sent these messages individually
22 from a cellular telephone, since the messages were sent every three to five seconds.
23 The automated computer equipment generated 59,568 cellular telephone numbers in
24 ascending sequential order and made text message calls to those numbers as shown
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1 by the call records. Therefore, I also conclude that Defendants employed and utilized
2 an ATDS which has the capacity to store or produce telephone numbers to be called,
3 using a random or sequential number generator; and the capacity to dial such numbers
4 as defined by the TCPA and accompanying FCC regulations.

5 25. In summary, it is my expert opinion that Defendants employed and utilized an ATDS
6 which has the capacity to store or produce telephone numbers to be called, using a
7 random or sequential number generator; and the capacity to dial such numbers as
8 defined by the TCPA and accompanying FCC regulations. My opinion is based on the
9 fact that Defendants made 59,568 continuous text calls to cellular telephone
10 subscribers from the cellular telephone number 650-283-0793 to other cellular
11 telephone numbers over the course of five days. Furthermore, these text calls started
12 at 6:22:51 PM on the evening of Sunday, November 28th, 2010 and were made every
13 few seconds until 3:38:22 PM on the afternoon of Thursday, December 2nd, 2010. In
14 addition, each of the text calls made were to cellular telephone numbers in ascending
15 sequential order during the continuous five-day calling period. Moreover, automated
16 equipment without human intervention must have been used to make these calls as it
17 would be impossible for these text calls to have been created and sent individually by
18 a human using a cellular telephone.

19 26. My opinions in this declaration are based upon extensive experience in the
20 telecommunications industry and a detailed understanding of telecommunications
21 systems within the telecommunications industry. I hereby reserve the right to
22 supplement or modify my opinions detailed in this report to the extent that new
23 information is made available through discovery or other means.
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1 27. I declare that the foregoing is true and correct subject to the laws of perjury of the
2 United States.

3 Executed in Las Vegas, Nevada, on this 29th day of August, 2012.

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Randall A. Snyder

Exhibit A

Randall A. Snyder

8113 Bay Pines Avenue, Las Vegas, NV 89128 • (702) 521-7900 • rsnyder@wrsvs.com

WIRELESS AND CELLULAR TELECOMMUNICATIONS CONSULTING SERVICES

Recognized expert in wireless and cellular telecommunications technology, executive manager and leader, designing, developing, marketing and managing mobile telecommunication system and software products.

- Over 25 years' experience specializing in wireless telecommunications technology, network architecture, design, system engineering, marketing and product management.
- Reputable leader and strategic developer with a successful background building startups.
- Skilled presenter, communicator, and educator with success impacting organizational performance, corporate reputation and increasing sales.
- Results-oriented, highly organized and creatively focused on adhering to organizational missions and philosophy while designing best-of-breed mobile technology solutions.
- Extensive travel experience to Asia-Pac, Latin America and Europe supporting engineering, sales and marketing with familiarity with wireless network operators and manufacturers worldwide.
- Several years of wireless standards development with extensive travel throughout Asia-Pac, Latin America and Europe.
- Author of the McGraw-Hill books "Mobile Telecommunications Networking with IS-41," and "Wireless Telecommunications Networking with ANSI-41, 2nd edition" published in 1997 and 2001, respectively.
- Author of several articles and taught several seminars on mobile telecommunications technology.
- Hold 18 issued and currently published pending patents on mobile and wireless technology.
- Member of the Mobile Multimedia Institute.
- Nominated for a Technology and Engineering Emmy Award for Outstanding Achievement in Advanced Media Technology in 2006.
- Expert witness and technology consultant; authored over 25 expert reports for patent cases and wireless technology litigation cases.

CORE COMPETENCIES AND EXPERTISE

Technology:	Wireless Network Engineering, Design and Architecture, Multimedia Systems, Mobile Internet, Mobile Video, Mobile Marketing, mCommerce and Mobile Payments, Mobile Telecommunications Standards, 3G, LBS, SMS, MMS, WAP, GSM, and ANSI-41 (CDMA) Networking, Signaling System No. 7 (SS7), Communications Protocols, Telephone Consumer Protection Act (TCPA)
Legal:	Provisional and Patent Applications, Subject Matter Expert Consultant, Expert Witness and Testimony, Litigation Support, Sales and Vendor Contract Negotiations and Review, Qualified as an Expert in Federal District Court
Management:	Strategic/Tactical Planning, Product Management, Marketing Management, Operations Management, Competitive Analysis, Problem Resolution, Project Planning, Risk Management
Organizational:	P&L Management, Budget Planning, Expense Reduction and Cost Control
Business Relations:	Seminars, Sales Presentations and Sales Engineering

PROFESSIONAL EXPERIENCE

Wireless Research Services, LLC • Las Vegas, NV • January 2007 – Present

Mobile Telecommunications Consulting

President & Founder

As President and Founder of Wireless Research Services, responsible for consulting business, and revenue as well as being the principal consultant. Areas of subject matter expertise include mobile and cellular networking including TCPA, 3G, GSM, ANSI-41, LBS, SMS, MMS, WAP, SS7, LBS and mobile multimedia systems. With this expertise, primary consulting is in the area of system and product architecture, design, development, management and marketing as well as patent preparation and development, expert reports, expert testimony and litigation support. Authored over 25 expert declarations, affidavits and reports for litigation and patent disputes, depositions and in-court testimony.

Finsphere Corp. • Bellevue, WA • September 2007 – August 2010

Mobile Telecommunications and Financial Identity Theft Solutions

Vice President Product Management & Wireless Engineering

Among the first handful of employees at Finsphere prior to Series A funding. As vice president of product management and wireless engineering and a member of the executive management team, responsible for product management activities and wireless technology solutions for Finsphere's products. These products encompass mobile location based software-as-a-service (SaaS) products offered primarily to financial institutions and banks. Responsibilities include product requirements and system functionality, strategic planning, R&D of new technologies, wireless network interconnectivity as well as wireless technology for Finsphere's products. Also responsible for market strategies, white papers and development and management of intellectual property and patent applications.

Entriq, Inc. • Carlsbad, CA • May 2004 – April 2007

Mobile Pay Media Solutions and Services

Vice President Product Management

As vice president of product management and a member of the executive management team, responsible for the entire product management team and system architecture for Entriq's products and services. Products encompassed mobile and broadband pay media applications (specializing in video), digital rights management (DRM) and security solutions, e-commerce and m-commerce systems as well as ad management and delivery solutions for both broadband and mobile media services. Responsibilities also included network and protocol analysis, market analysis, evaluation of third-party software and services, all vendor contract negotiations, RFP responses and overall administrative responsibility for the entire product line. Responsible for directing and managing the technical writing department producing all user documentation associated with the products. Nominated for a National Television Arts and Sciences Emmy Award for Outstanding Achievement in Advanced Media Technology for unique mobile technology designed, developed and commercially deployed as part of Entriq's solution.

m-Qube, Inc. (acquired by Verisign) • Boston, MA • February 2002 – November 2003

Mobile Marketing Solutions and Services

Vice President Product Management and Carrier Marketing

As vice president of product management and carrier marketing for m-Qube, responsible for the entire product management and carrier marketing teams, member of the executive management team and one of the founders. Responsible for all product management, system engineering and product strategy for all business conducted with the wireless industry and carriers. In charge of the market strategy and wireless network architecture for m-Qube's mobile marketing service, a value-added service offering mobile marketing solutions to wireless carriers using short message services (SMS) for GSM and CDMA networks. The service architecture enabled branded companies to deploy promotional marketing and messaging campaign dialogs with mobile subscribers via SMS. The network architecture required definition and design of all aspects of the overall network including SMS technology, interconnectivity to the wireless carriers, signaling, traffic management, market requirements for features and services, network equipment specifications and OA&M.

Bitfone Corporation • Mountain View, CA • April 2001 – February 2002
Mobile Internet Solutions

Vice President Product Management and Marketing

As vice president of product marketing for Bitfone and a member of the executive management team, responsible for the entire product management team and all of the company's product definitions, strategies and positioning. Direct responsibility for market and product requirements, market research, competitive analysis, product strategy and sales strategy. Bitfone's products included the iBroker, a mobile Internet technology infrastructure platform to enhance WAP, MMS, mobile e-mail and wireless messaging. Also responsible for the mProve product (obtained via merger with Digital Transit, Inc.) providing over-the-air firmware and software update technology to mobile devices.

**Openwave Systems (via merger of Phone.com and Software.com) • Redwood City, CA •
November 2000 – April 2001**
Mobile SMS, MMS, WAP Solutions

Executive Director Emerging Technologies

As executive director of emerging technologies for Openwave Systems, responsible for new 3G technologies and providing market and product plans for those technologies for the entire product line. Primary responsibility for the 3GPP Multimedia Messaging Service (MMS), collecting market requirements from customers, developing corporate strategy for MMS and preparing the organization for additional development of the product. In addition, taught wireless technology classes to the different departments at Openwave and educated them on wireless service provider strategies and network technologies.

**@Mobile and Software.com (via acquisition) • Santa Barbara, CA • March 2000 – November
2000**
Mobile Messaging Solutions

Director Wireless Product Management

As director in charge of Software.com's new wireless products group (via acquisition of @Mobile), responsible for the product managers and for all of the wireless internet infrastructure products. Responsibilities include the overall market and product strategy for Software.com's wireless e-mail, short message service, instant messaging and unified messaging products. Responsible for the overall revenues generated from these products based on detailed product plans and internal organizational planning. Much of his time was spent working with the executive management team and the sales directors on corporate market strategy.

FreeSpace Communications, Inc. • Palo Alto, CA • December 1999 – March 2000
Wireless Network Architecture

Consulting Network Systems Engineer

As an engineering consultant, responsible for the complete design of the backbone network architecture for a new broadband fixed wireless data network. This new architecture incorporates DSL as the backbone network technology. The network architecture requires definition and design of all aspects of the overall network plan including DSL technology, IP technology, ATM technology, interconnectivity to the PSTN, operations signaling, traffic engineering, market requirements for network features and services, network equipment specifications and OA&M.

Synacom Technology, Inc. • San Jose, CA • December 1998 – December 1999
Mobile Network Infrastructure Solutions

Executive Director Product Marketing and Management

As Executive Director of Product Management and Marketing for Synacom, responsible for managing the entire product management and marketing department of Synacom Technology, including market research and planning, product management and market communications. Lead the entire design, definition and product direction of all aspects of Synacom's products.

Synacom Technology, Inc. • San Jose, CA • August 1997 – December 1998

Mobile Network Infrastructure Solutions

Director Systems Engineering

As Director of Systems Engineering for Synacom, responsible for coordinating and managing the overall functional and requirements specifications for all Synacom's products as well as the detailed test plans used for alpha system testing of those products. Also responsible for directing and managing the technical writing department producing all of the user documentation associated with all of the products. Provided the primary sales engineering support for sales and marketing and was involved in nearly every aspect of the product lifecycle.

Synacom Technology, Inc. • San Jose, CA • November 1996 – August 1997

Mobile Network Infrastructure Solutions

Director Consulting Services and Principal Engineer

As Director of Consulting Services and Principal Engineer for Synacom Technology, Inc., responsible for obtaining, coordinating and managing all technical consulting projects performed by the company. These projects included wireless network architecture and design for both IS-41 and GSM networks for dozens of client companies (carriers and equipment manufacturers). In this role, continued as a member of both the ANSI/TIA TR45.2 Subcommittee for cellular radio intersystem operations standards and the ANSI/TIA TR46 Committee for 1900 MHz GSM PCS standards. Major contributor to TR46 in the area of GSM-to-IS-41 network interworking. Also authored, edited and published TIA standard specification IS-93 for cellular network interconnections to the PSTN and ISDN.

Synacom Technology, Inc. • San Jose, CA • April 1992 – November 1996

Mobile Network Infrastructure Solutions

Principal Engineer

As the principal engineer for Synacom Technology, was lead engineer for many consulting projects. Consulted for McCaw Cellular, AT&T Wireless, AirTouch Cellular, AirTouch Satellite Services, Globalstar, Nokia, MCI, Sprint PCS, XYPoint, NextWave, NewNet American Personal Communications, CTIA and several other national and international wireless telecommunications companies.

Wrote wireless network design and analysis papers including HLR specifications, Authentication Center specifications, PCS network design, short message service (SMS) design, intelligent network applications of wireless technology and in-house expert in signaling protocols. Extensive experience with Signaling System No. 7, including both protocol implementation and design. Authored the Standard Requirements Document for the SS7-based A-interface between the base station and MSC used throughout the TIA. Also involved in the design of the Bellcore WACS/PACS technology, digital cellular network service and feature descriptions, SCPs and HLRs. Extensive experience developing the architecture and design of distributed intelligent networks including, SS7, cellular, PCS, AIN and WIN networks. Key member of the original Cellular Digital Packet Data (CDPD) architecture and design team. Designed the CDPD air interface protocol emulator developed and marketed by AirLink Communications, Inc.

AT&T Bell Laboratories • Whippany, NJ • December 1990 – April 1992

Mobile Network Architecture Solutions

Consulting Member of the Technical Staff

As a consultant to AT&T Bell Laboratories, evaluated wireless technology services for the Wireless Systems Architecture group. Also participated as a system engineer on the design of the Global System for Mobile (GSM) communication architecture and a software engineer developing the base station controller (BSC) for GSM. Also responsible for planning, coordinating, designing and testing the SS7 protocol software for the GSM A-interface between the BSC, MSC and operations and maintenance center (OMC). High-level and detailed design specifications were developed to coordinate the protocol testing between two remote laboratories. Provided the traffic analysis and traffic engineering of call traffic for the BSC. Specifically designed and developed the dynamic traffic overload control subsystem for the BSC. Presentations were given to technical staffs at multiple Bell Laboratories facilities supporting this work.

DGM&S, Inc. • Mt. Laurel, NJ • May 1987 – December 1990

Telecommunications Network Infrastructure Solutions

Senior Staff Consultant

As a Senior Staff Consultant, responsible for the design, development and test coordination of an advanced intelligent network applications platform for a service control point (SCP). Also spent several years as a consulting software engineer for Siemens AG, developing and testing SS7 and call control software for the EWSD digital switching system for international as well as U.S. national network implementations. This work involved extensive travel to both Frankfurt and Munich, Germany for software system design and testing. Also involved in the concept, design and technical marketing of proprietary enabling technology software products for SS7 and ISDN.

ADP, Inc. • Mt. Laurel, NJ • May 1986 – May 1987

Financial and Brokerage Solutions and Services

Senior Software Engineer and Analyst

As a Senior Software Engineer for ADP, Inc., responsible for the design and development of data communications and real time database application software for a host data center that provided real time financial information to large brokerage houses. Data communication protocol expertise in HDLC, RS-232 and IBM BiSync.

C3, Inc. • Cape May, NJ • June 1984 – May 1986

U.S. Coast Guard Shipboard Software Consulting Solutions

Consulting Systems Analyst and Software Engineer

As a civilian consulting systems analyst and engineer to the U.S. Coast Guard Electronics Engineering Center (EECEN) for C3, Inc., developed sophisticated user-friendly database software for shipboard use including inventory and law enforcement applications. The work included the follow-through of the entire project lifecycle including writing of requirements, functional, design and program specifications, coding, debugging, alpha and beta testing, release, shipboard installation and continuing technical support of the product. Received a personal commendation from Admiral W.F. Merlin, Chief, Office of Command, Control and Communications, for successful efforts on these projects.

EDUCATION

B.A. Mathematics (Astronomy Minor)
Franklin and Marshall College 1984

PATENTS ISSUED

System and Method for Authenticating Cellular Telephonic Communication, US Patent #5799084, Issued August 25, 1998.

Authentication Key Management System and Method, US Patent #5850445, Issued December 15, 1998.

Secure Authentication-Key Management System and Method for Mobile Communications, US Patent #5970144, Issued October 19, 1999.

Authentication Key Management System and Method, US Patent #6128389, Issued October 3, 2000.

System and Method to Initiate a Mobile Data Communication Utilizing a Trigger System, US Patent #7403788, Issued July 22, 2008.

System and Method to Initiate a Mobile Data Communication Utilizing a Trigger System, US Patent #7792518, Issued September 7, 2010.

System and Method for Mobile Identity Protection of a User of Multiple Computer Applications, Networks or Devices, US Patent #8116731, Issued February 14, 2012.

System and Method to Initiate a Mobile Data Communication Utilizing a Trigger System, US Patent #8131262, Issued March 6, 2010.

Mobile Messaging Short Code Translation and Routing System and Method, US Patent #8155677, Issued April 10, 2012.

PUBLISHED PATENTS PENDING

Method and System to Automatically Publish Media Assets, USPTO Patent Application Publication #20060224943, October 5, 2006.

Centralized Mobile and Wireless Messaging Opt-Out Registry System and Method, USPTO Patent Application Publication #20080114884, May 15, 2008.

Wireless Messaging Address System and Method, USPTO Patent Application Publication #20080119210, May 22, 2008.

Method for Tracking Credit Card Fraud, USPTO Patent Application Publication #20080227471, September 18, 2008.

System and Method for Wireless Device Based User Authentication, USPTO Patent Application #20090204815, August 13, 2009.

System and Method for Determining and Delivering Appropriate Multimedia Content to Data Communication Devices, USPTO Patent Application #20100041380, February 18, 2010.

System and Method for Identity Protection Using Mobile Device Signaling Network Derived Location Pattern Recognition, USPTO Patent Application #20100130165, May 27, 2010.

Systems and Methods for Authenticating a User of a Computer Application, Network or Device Using a Wireless Device, USPTO Patent Application #20110154447, June 23, 2011.

System and Method for Improving Internet Search Results Using Telecommunications Data, USPTO Patent Application #20110202407, August 18, 2011.

PUBLICATIONS

IS-41/GSM Interoperability by Randy Snyder; December, 1995, Cellular Networking Perspectives, Cellular Networking Perspectives, LTD, Calgary, Alberta, Canada.

Gallagher, Michael D. and Snyder, Randall A. Mobile Telecommunications Networking with IS-41; McGraw-Hill, New York, NY USA; © Copyright 1997 Michael D. Gallagher and Randall A. Snyder.

Forecasting SS7 Traffic by Randall A. Snyder; November 1, 2000. Wireless Review, Volume 17, Number 21, Intertec Publishing, Overland Park, KS USA.

Snyder, Randall A. and Gallagher, Michael D. Wireless Telecommunications Networking with ANSI-41 Second Edition; McGraw-Hill, New York, NY USA; © Copyright 2001 Randall A. Snyder and Michael D. Gallagher.

What Workers Want from Wireless by Randall A. Snyder; April 15, 2004. America's Network, Advanstar Communications, Santa Ana, California USA.

CITATIONS

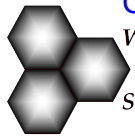
Method and Apparatus for Routing Short Messages, US Patent #6308075, Issued October 23, 2001.

Mediation Software for Delivery of Interactive Mobile Messaging and Personalized Content to Mobile Devices. Patent Application # 20020120779, August 29, 2002.

Automatic In-Line Messaging System, US Patent #6718178, Issued April 6, 2004.

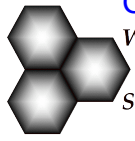
Method and System for Wireless Instant Messaging, US Patent #7058036, Issued June 6, 2006.

United States Court of Appeals for the Ninth Circuit. Satterfield v. Simon & Schuster, Inc. No. 07-16356, D.C. No. CV-06-02893-CW Opinion. Appeal from the United States District Court for the Northern District of California. Opinion by N.R. Smith, Circuit Judge. Filed June 19, 2009.



Randall A. Snyder – Expert Case List

CASE	ROLE
Abrams v. Facebook, Inc.	Testifying Expert
Albrecht v. Verisign et al.	Testifying Expert
Annoni v. FYISMS	Testifying Expert
Ayers v. Media Breakaway	Testifying Expert
Bailey v. HSBC	Testifying Expert
Bradberry v. T-Mobile USA	Testifying Expert
Cricket v. HipCricket	Testifying Expert
Criswell v. MySpace	Testifying Expert
Dobbins v. Wells Fargo	Testifying Expert
Griffith v. CPS	Testifying Expert
Intellectual Ventures v. AT&T Mobility	Testifying Expert
Keim v. ADF (Pizza Hut)	Testifying Expert
Reed v. Sprint Nextel Corp.	Testifying Expert
Rynearson v. Motricity, Inc.	Testifying Expert
Satterfield v. Ipsh! and Simon & Schuster	Testifying Expert
TeleCommunication Systems, Inc v. Mobile365, Inc.	Testifying Expert
Tipoo v. Enhanced Recovery Company	Testifying Expert
Vandyke v. Media Breakaway	Testifying Expert
Walker v. Motricity, Inc.	Testifying Expert



Wireless
Research
Services

Wireless Research Services, LLC
Rate Sheet January 1, 2012

Wireless Research Services, LLC

2012 Rate Sheet

ITEM	FEE
Expert Witness Consulting, Reports, Depositions	\$400 per hour
In-court Testimony	\$450 per hour
Required Travel, Lodging, Board and Administrative Expenses	Billed at Actual Cost No Charge for Idle Travel Time
Retainer at Time of Engagement	\$2,500